

## DESCRIPTION OF TABLES AND CHARTS.

Table I gives the data ordinarily needed for climatological studies for about 158 Weather Bureau stations making simultaneous observations at 8 a. m. and 8 p. m., seventy-fifth meridian time, daily, and for about 41 others making only one observation. The altitudes of the instruments above ground are also given.

Table II gives a record of precipitation, the intensity of which at some period of the storm's continuance equaled or exceeded the following rates:

| Duration (minutes).....      | 5    | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 50   | 60   |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Rates per hour (inches)..... | 3.00 | 1.80 | 1.40 | 1.20 | 1.05 | 1.00 | 0.94 | 0.90 | 0.87 | 0.84 | 0.80 |

It is impracticable to make this table sufficiently wide to accommodate on one line the record of accumulated falls that continue at an excessive rate for several hours. In such cases *the record is broken at the end of each 50 minutes*, the accumulated amounts being recorded on successive lines until the excessive rate ends.

At stations where no storm of sufficient intensity to entitle it to a place in the full table has occurred, the greatest precipitation of any single storm has been given, also the greatest hourly fall during that storm.

Table III gives, for about 30 stations of the Canadian Meteorological Service, the means of pressure and temperature, total precipitation, and depth of snowfall, and the respective departures from normal values, except in the case of snowfall.

Chart I.—Hydrographs for several of the principal rivers of the United States.

Chart II.—Tracks of centers of high areas; and

Chart III.—Tracks of centers of low areas. The Roman numerals show the chronological order of the centers. The figures within the circles show the days of the month; the letters *a* and *p* indicate, respectively, the observations at 8 a. m. and 8 p. m., seventy-fifth meridian time. Within each circle is also given (Chart II) the last three figures of the highest barometric reading and (Chart III) the lowest reading reported at or near the center at that time, and in both cases as reduced to sea level and standard gravity.

Chart IV.—Temperature departures. This chart presents the departures of the monthly mean temperatures from the monthly normals. The normals used in computing the departures were computed for a period of 31 years (1873 to 1903) and are published in Weather Bureau Bulletin "R," Washington, 1908. The shaded portions of the chart indicate areas of positive departures and unshaded portions indicate areas of negative departures. Generalized lines connect places having approximately equal departures of like sign. This chart of monthly temperature departures in the United States was first published in the Monthly Weather Review for July, 1909.

Chart V.—Total precipitation. The scale of shades showing the depth is given on the chart. Where the monthly amounts are too small to justify shading, and over sections of the country where stations are too widely separated or the topography is too diversified to warrant reasonable accuracy in shading, the actual depths are given for a limited number of representative stations. Amounts less than 0.005 inch are indicated by the letter T, and no precipitation by 0.

Chart VI.—Percentage of clear sky between sunrise and sunset. The average cloudiness at each Weather Bureau station is determined by numerous personal observations between sunrise and sunset. The difference between the observed cloudiness and 100 is assumed to represent the percentage of clear sky, and the values thus obtained are the basis of this chart. The chart does not relate to the nighttime.

Chart VII.—Isobars and isotherms at sea level and prevailing wind directions. The pressures have been reduced to sea level and standard gravity by the method described by Prof. Frank H. Bigelow on pages 13–16 of the REVIEW for January, 1902. The pressures have also been reduced to the mean of the 24 hours by the application of a suitable correction to the mean of the 8 a. m. and 8 p. m. readings at stations taking two observations daily, and to the 8 a. m. or the 8 p. m. observations, respectively, at stations taking but a single observation. The diurnal corrections so applied will be found in the Annual Report of the Chief of the Weather Bureau, 1900–1901, volume 2, Table 27, pages 140–164.

The isotherms on the sea-level plane have been constructed by means of the data summarized in chapter 8 of volume 2 of the annual report just mentioned. The correction  $t_0 - t$ , or temperature on the sea-level plane minus the station temperature as given by Table 48 of that report, is added to the observed surface temperature to obtain the adopted sea-level temperature.

The prevailing wind directions are determined from hourly observations at the great majority of the stations; a few stations having no self-recording wind direction apparatus determine the prevailing direction from the daily or twice-daily observations only.

Chart VIII.—Total snowfall. This is based on the reports from regular and cooperative observers and shows the depth in inches and tenths of the snowfall during the month. In general, the depth is shown by lines inclosing areas of equal snowfall, but in special cases figures are also given.

Chart VIII is published only when the general snow cover is sufficiently extensive to justify its preparation.

TABLE I.—*Climatological data for United States Weather Bureau stations, October, 1914.*

| Districts and stations.        | Elevation of instruments.           |                              |                             | Pressure in inches.                      |  | Temperature of the air, in degrees Fahrenheit. |            |      |                             |          |       | Precipitation, inches. |      |      | Wind.         |                          |                       | Average cloudiness, tenths.          |                            |        | Total snow-fall.<br>Snow on ground at end of month. |                       |                    |            |       |     |     |     |
|--------------------------------|-------------------------------------|------------------------------|-----------------------------|--|--|--|------------|------|-----------------------------|----------|-------|------------------------|------|------|---------------|--------------------------|-----------------------|--------------------------------------|----------------------------|--------|---|-----------------------|--------------------|------------|-------|-----|-----|-----|
|                                |                                     |                              |                             |  |  | Mean max+mean<br>min.+2.                       |            |      | Departure from nor-<br>mal. |          |       | Mean maximum.          |      |      | Mean minimum. |                          |                       | Mean relative humidity, per<br>cent. |                            |        | Total movement,<br>miles.                           |                       |                    |            |       |     |     |     |
|                                | Barometer above sea<br>level, feet. | Thermometer above<br>ground. | Anemometer above<br>ground. | Station, reduced to<br>mean of 24 hours. | Sea level, reduced to<br>mean of 24 hours. | Departure from nor-<br>mal.                    | Mean       | Max. | Min.                        | Maximum. | Date. | Mean maximum.          | Max. | Min. | Minimum.      | Greatest daily<br>range. | Mean wet thermometer. | Mean dew point.                      | Days with 0.01 or<br>more. | Total. | Departure from nor-<br>mal.                         | Prevailing direction. | Miles per<br>hour. | Direction. | Date. |     |     |     |
| <b>New England.</b>            |                                     |                              |                             | 53.1 + 2.7                               |  |  |            |      |                             |          |       |                        |      |      |               |                          | 76                    | 2.46 - 1.2                           |                            |        |   |                       |                    |            |       | 5.5 |     |     |
| Eastport.....                  | 76                                  | 67                           | 85                          | 29.97                                    | 30.05 + 0.05                               | 49.2 + 2.6                                     | 76         | 3    | 56                          | 24       | 28    | 42                     | 28   | 24   | 75            | 2.56 - 1.3               | 9                     | 7,891                                | sw.                        | 41     | ne.   | 19                    | 11                 | 10         | 10    | 5.7 |     |     |
| Greenville.....                | 1,070                               | 6                            | 28.84                       | 30.04                                    |  | 46.6 - 1.4                                     | 76         | 4    | 57                          | 15       | 25    | 36                     | 42   | 30   | 75            | 3.07 - 2.4               | 10                    | 5,680                                | sw.                        | 30     | sw.   | 24                    | 14                 | 8          | 9     | 4.9 |     |     |
| Portland, Me. ....             | 103                                 | 82                           | 117                         | 29.96                                    | 30.09 + 0.05                               | 51.2 + 2.1                                     | 81         | 5    | 60                          | 22       | 24    | 42                     | 46   | 41   | 71            | 2.05 - 1.6               | 5                     | 6,328                                | nw.                        | 28     | nw.   | 27                    | 8                  | 9          | 14    | 6.0 |     |     |
| Concord.....                   | 288                                 | 70                           | 79                          | 29.79                                    | 30.10 + 0.05                               | 51.2 + 2.5                                     | 81         | 4    | 63                          | 21       | 28    | 39                     | 40   | 35   | 75            | 1.12 - 2.1               | 6                     | 8,103                                | s.                         | 36     | s.  | 10                    | 8                  | 8          | 15    | 6.3 |     |     |
| Burlington.....                | 404                                 | 11                           | 45                          | 29.64                                    | 30.08 + 0.05                               | 49.2 + 3.3                                     | 76         | 5    | 59                          | 27       | 24    | 41                     | 35   | 43   | 74            | 1.10 - 2.1               | 7                     | 4,713                                | s.                         | 25     | nw.   | 31                    | 7                  | 8          | 16    | 6.5 |     |     |
| Northfield.....                | 876                                 | 12                           | 60                          | 29.14                                    | 30.10 + 0.06                               | 47.9 + 4.3                                     | 77         | 4    | 60                          | 17       | 23    | 36                     | 44   | 41   | 75            | 1.00 - 1.5               | 6                     | 5,766                                | sw.                        | 28     | nw.   | 29                    | 15                 | 16         | 9     | 4.7 |     |     |
| Boston.....                    | 115                                 | 188                          | 29.95                       | 30.09 + 0.04                             | 57.0 + 4.7                                 | 83   | 3          | 66   | 28                          | 26       | 49    | 31                     | 51   | 57   | 75            | 1.54 - 2.3               | 7                     | 10,757                               | sw.                        | 43     | sw.   | 53                    | 11                 | 10         | 14    | 8.5 |     |     |
| Nantucket.....                 | 12                                  | 14                           | 90                          | 30.08                                    | 30.09 + 0.04                               | 56.2 + 1.7                                     | 74         | 4    | 62                          | 33       | 28    | 50                     | 24   | 52   | 50            | 84                       | 2.15 - 1.2            | 5                                    | 11,989                     | sw.    | 30  | sw.                   | 30                 | 7          | 10    | 14  | 8.2 |     |
| Bloc Island.....               | 26                                  | 11                           | 46                          | 30.06                                    | 30.09 + 0.04                               | 56.4 + 1.1                                     | 70         | 5    | 63                          | 34       | 27    | 51                     | 18   | 53   | 50            | 81                       | 3.33 - 0.8            | 4                                    | 1,260                      | sw.    | 27  | nw.                   | 16                 | 11         | 10    | 4   | 4.3 |     |
| Narragansett Pier.....         | 9                                   |                              |                             |  |  | 55.2 + 3.1                                     | 75         | 3    | 63                          | 24       | 28    | 48                     | 27   | 30   | 75            | 4.26 - 3.1               | 4                     | 1,530                                | sw.                        | 27     | nw.   | 12                    | 15                 | 9          | 11    | 5.5 |     |     |
| Providence.....                | 160                                 | 215                          | 251                         | 29.92                                    | 30.09 + 0.02                               | 55.6 + 3.4                                     | 79         | 3    | 64                          | 27       | 28    | 47                     | 30   | 50   | 74            | 2.97 - 0.9               | 5                     | 7,737                                | sw.                        | 24     | nw.   | 30                    | 11                 | 11         | 10    | 5.5 |     |     |
| Hartford.....                  | 159                                 | 122                          | 140                         | 29.91                                    | 30.09 + 0.03                               | 56.4 + 5.2                                     | 82         | 3    | 66                          | 26       | 28    | 47                     | 41   | 49   | 74            | 3.05 - 0.9               | 5                     | 4,725                                | s.                         | 27     | nw.   | 30                    | 10                 | 11         | 10    | 5.2 |     |     |
| New Haven.....                 | 106                                 | 117                          | 155                         | 29.98                                    | 30.10 + 0.04                               | 57.0 + 4.2                                     | 79         | 11   | 66                          | 28       | 28    | 49                     | 30   | 51   | 46            | 72                       | 3.81 - 0.1            | 5                                    | 5,892                      | s.     | 30  | sw.                   | 29                 | 11         | 10    | 10  | 5.2 |     |
| <b>Middle Atlantic States.</b> |                                     |                              |                             | 58.8 + 3.4                               |  |  |            |      |                             |          |       |                        |      |      |               | 77                       | 1.91 - 1.2            |                                      |                            |        |   |                       |                    |            | 5.4   |     |     |     |
| Albany.....                    | 97                                  | 102                          | 115                         | 29.98                                    | 30.09 + 0.03                               | 54.6 + 4.2                                     | 82         | 11   | 64                          | 30       | 28    | 45                     | 36   | 48   | 74            | 0.84 - 2.2               | 5                     | 5,039                                | s.                         | 28     | s.  | 10                    | 13                 | 9          | 9     | 4.7 |     |     |
| Binghamton.....                | 871                                 | 10                           | 69                          | 29.16                                    | 30.10 + 0.04                               | 50.4 + 5.8                                     | 82         | 10   | 63                          | 28       | 27    | 44                     | 35   | 47   | 70            | 1.92 - 1.8               | 11                    | 3,136                                | s.                         | 27     | n.  | 7                     | 12                 | 9          | 12    | 5.9 |     |     |
| New York.....                  | 314                                 | 414                          | 454                         | 29.76                                    | 30.09 + 0.03                               | 50.0 + 3.4                                     | 80         | 11   | 66                          | 31       | 28    | 52                     | 47   | 52   | 74            | 1.38 - 1.6               | 4                     | 10,314                               | s.                         | 52     | nw.   | 27                    | 8                  | 11         | 12    | 5.6 |     |     |
| Harrisburg.....                | 374                                 | 94                           | 104                         | 29.71                                    | 30.12 + 0.04                               | 58.2 + 4.2                                     | 81         | 10   | 66                          | 32       | 28    | 50                     | 27   | 52   | 74            | 1.49 - 1.6               | 4                     | 3,896                                | e.                         | 25     | n.  | 26                    | 10                 | 8          | 13    | 5.6 |     |     |
| Philadelphia.....              | 117                                 | 123                          | 190                         | 28.99                                    | 30.12 + 0.05                               | 61.2 + 4.9                                     | 82         | 10   | 68                          | 33       | 28    | 54                     | 22   | 54   | 71            | 6,242                    | s.                    | 29                                   | nw.                        | 27     | 11  | 9                     | 12                 | 5.3        |       |     |     |     |
| Reading.....                   | 825                                 | 81                           | 98                          | 28.76                                    | 30.11                                      |  | 58.6 + 3.1 | 82   | 10                          | 67       | 31    | 27                     | 50   | 31   | 51            | 74                       | 2.40 - 1.9            | 6                                    | 4,082                      | s.e.   | 27  | w.                    | 8                  | 7          | 16    | 6.3 |     |     |
| Saratoga.....                  | 905                                 | 111                          | 119                         | 28.24                                    | 30.11 + 0.04                               | 55.8 + 4.4                                     | 82         | 10   | 64                          | 29       | 27    | 49                     | 36   | 51   | 74            | 1.05 - 1.9               | 5                     | 4,428                                | n.                         | 23     | nw.   | 27                    | 12                 | 5          | 14    | 5.7 |     |     |
| Atlantic City.....             | 52                                  | 37                           | 48                          | 30.05                                    | 30.11 + 0.04                               | 59.3 + 2.4                                     | 75         | 11   | 65                          | 32       | 28    | 54                     | 21   | 55   | 71            | 2.25 - 1.0               | 6                     | 5,534                                | sw.                        | 23     | nw.   | 27                    | 10                 | 14         | 7     | 5.2 |     |     |
| Cape May.....                  | 18                                  | 13                           | 49                          | 30.11                                    | 30.13 + 0.06                               | 61.5 + 1.9                                     | 82         | 11   | 63                          | 37       | 27    | 56                     | 28   | 52   | 71            | 2.15 - 1.2               | 6                     | 6,293                                | e.                         | 24     | nw.   | 30                    | 10                 | 9          | 12    | 5.7 |     |     |
| Trenton.....                   | 190                                 | 159                          | 183                         | 29.89                                    | 30.09 + 0.03                               | 59.0 + 3.1                                     | 84         | 11   | 63                          | 31       | 28    | 51                     | 31   | 52   | 74            | 1.74 - 1.7               | 7                     | 3,120                                | s.                         | 36     | nw.   | 30                    | 10                 | 10         | 10    | 5.2 |     |     |
| Baltimore.....                 | 123                                 | 100                          | 113                         | 29.98                                    | 30.11 + 0.03                               | 61.4 + 3.9                                     | 83         | 10   | 69                          | 33       | 28    | 54                     | 23   | 55   | 71            | 1.24 - 1.8               | 3                     | 4,723                                | sw.                        | 30     | n.  | 26                    | 11                 | 10         | 12    | 5.4 |     |     |
| Washington.....                | 112                                 | 62                           | 85                          | 29.98                                    | 30.10 + 0.03                               | 60.2 + 3.6                                     | 86         | 10   | 66                          | 33       | 28    | 51                     | 33   | 54   | 71            | 1.65 - 1.4               | 7                     | 3,802                                | s.                         | 27     | n.  | 30                    | 13                 | 6          | 12    | 5.4 |     |     |
| Lynchburg.....                 | 631                                 | 153                          | 188                         | 28.35                                    | 30.10 + 0.01                               | 60.9 + 4.0                                     | 85         | 9    | 71                          | 29       | 26    | 51                     | 33   | 53   | 70            | 4.42 + 1.0               | 10                    | 4,082                                | ne.                        | 30     | n.  | 52                    | 26                 | 7          | 13    | 6.6 |     |     |
| Mount Weather.....             | 1,725                               | 10                           | 75                          | 26.80                                    | 30.08 + 0.01                               | 55.9 + 4.4                                     | 77         | 10   | 62                          | 26       | 27    | 49                     | 23   | 50   | 71            | 2.40 - 0.0               | 11                    | 9,940                                | e.                         | 42     | n.  | 27                    | 10                 | 12         | 9     | 5.4 |     |     |
| Norfolk.....                   | 91                                  | 170                          | 205                         | 30.01                                    | 30.11 + 0.04                               | 63.9 + 2.6                                     | 84         | 9    | 72                          | 37       | 28    | 58                     | 25   | 55   | 80            | 2.39 - 1.5               | 9                     | 8,880                                | ne.                        | 42     | n.  | 27                    | 11                 | 9          | 9     | 5.5 |     |     |
| Richmond.....                  | 144                                 | 11                           | 52                          | 29.96                                    | 30.11 + 0.03                               | 61.8 + 2.0                                     | 85         | 9    | 71                          | 29       | 28    | 52                     | 32   | 55   | 81            | 1.67 - 1.6               | 8                     | 5,000                                | s.e.                       | 30     | nw.   | 30                    | 16                 | 8          | 7     | 4.4 |     |     |
| Wytheville.....                | 2,293                               | 40                           | 47                          | 27.73                                    | 30.11 + 0.02                               | 55.4 + 1.8                                     | 81         | 8    | 65                          | 24       | 28    | 46                     | 35   | 50   | 87            | 3.04 - 0.1               | 16                    | 2,605                                | e.                         | 19     | sw.   | 30                    | 16                 | 8          | 7     | 4.4 |     |     |
| <b>South Atlantic States.</b>  |                                     |                              |                             | 65.4 + 1.7                               |  |  |            |      |                             |          |       |                        |      |      |               | 81                       | 3.84 - 0.1            |                                      |                            |        |   |                       |                    |            | 5.5   |     |     |     |
| Asheville.....                 | 2,255                               | 70                           | 84                          | 27.76                                    | 30.11 + 0.02                               | 57.8 + 2.5                                     | 81         | 7    | 67                          | 23       | 28    | 48                     | 39   | 52   | 49            | 82                       | 5.83 + 2.0            | 9                                    | 5,060                      | se.    | 29  | e.                    | 3                  | 8          | 10    | 13  | 6.0 |     |
| Charlotte.....                 | 773                                 | 68                           | 76                          | 28.28                                    | 30.10 + 0.02                               | 62.2 + 1.1                                     | 81         | 7    | 70                          | 30       | 28    | 54                     | 25   | 56   | 53            | 80                       | 3.11 - 0.0            | 6                                    | 4,547                      | ne.    | 22  | sw.                   | 17                 | 10         | 6     | 15  | 6.0 |     |
| Hatteras.....                  | 111                                 | 12                           | 50                          | 30.07                                    | 30.08 + 0.02                               | 67.0 + 1.0                                     | 79         | 11   | 72                          | 44       | 28    | 58                     | 23   | 62   | 60            | 82                       | 5.78 - 0.3            | 8                                    | 8,939                      | ne.    | 47  | n.                    | 27                 | 11         | 9     | 12  | 5.3 |     |
| Manteo.....                    | 12                                  | 4                            | 46                          |  |  | 65.0   |            |      |                             |          |       |                        |      |      |               |                          |                       |                                      |                            |        |   |                       |                    |            | 5.6   |     |     |     |
| Raleigh.....                   | 376                                 | 103                          | 110                         | 29.68                                    | 30.09 + 0.02                               | 63.2 + 2.7                                     | 84         | 9    | 71                          | 32       | 28    | 55                     | 23   | 57   | 53            | 77                       | 1.17 - 2.3            | 9                                    | 4,752                      | sw.    | 28  | nw.                   | 26                 | 11         | 6     | 13  | 5.6 |     |
| Wilmingtton.....               | 78                                  | 81                           | 90                          | 30.00                                    | 30.08 + 0.02                               | 65.8 + 2.5                                     | 86         | 11   | 74                          | 34       | 28    | 58                     | 27   | 60   | 58            | 82                       | 8.41 + 1.1            | 11                                   | 4,745                      | ne.    | 30  | n.                    | 27                 | 11         | 8     | 12  | 5.6 |     |
| Charleston.....                | 48                                  | 11                           | 92                          | 30.01                                    | 30.06                                      |  | 68.4 + 1.3 | 84   | 11                          | 74       | 40    | 28                     | 62   | 22   | 63            | 61                       | 82                    | 4.14 + 0.2                           | 6                          | 6,735  | ne.   | 36                    | e.                 | 3          | 13    | 5   | 13  | 5.3 |
| Columbia, S. C. ....           | 351                                 | 41                           | 57                          | 29.70                                    | 30.08 + 0.01                               | 64.4 + 4.0                                     | 86         | 11   | 73                          | 34       | 28    | 56                     | 34   | 58   | 54            | 76                       | 2.70 - 0.3            | 8                                    | 4,648                      | ne.    | 26  | n.                    | 27                 | 14         | 9     | 14  | 4.9 |     |
| Augusta.....                   | 180                                 | 89                           | 97                          | 29.88                                    | 30.07 + 0.01                               | 65.0 + 1.4                                     | 88         | 11   | 74                          | 34       | 28    | 56                     | 34   | 59   | 57            | 84                       | 2.89 + 0.6            | 9                                    | 3,349                      | ne.    | 27  | n.                    | 27                 | 12         | 7     | 12  | 5.4 |     |
| Savannah.....                  | 65                                  | 150                          | 194                         | 29.98                                    | 30.05 + 0.01                               | 68.3 + 2.5                                     | 88         | 11   | 76                          | 40       | 28    | 62                     | 22   | 63   | 61            | 84                       | 8.29 + 3.7            | 8                                    | 7,246                      | ne.    | 31  | n.                    | 21                 | 11         | 6     | 12  | 5.6 |     |
| Jacksonville.....              | 43                                  | 96                           | 129                         | 29.98                                    | 30.03 + 0.01                               | 71.5 + 1.9                                     | 86         | 11   | 79                          | 46       | 28    | 64                     | 21   | 66   | 64            | 85                       | 2.34 - 2.7            | 8                                    | 5,771                      | ne.    | 37  | sw.                   | 15                 | 12         | 6     | 13  | 5.7 |     |
| <b>Florida Peninsula.</b>      |                                     |                              |                             | 74.7 - 1.3                               |  |  |            |      |                             |          |       |                        |      |      |               | 79                       | 7.80 + 2.8            |                                      |                            |        |   |                       |                    |            | 5.7   |     |     |     |
| Key West.....                  | 22                                  | 10                           | 64                          | 29.92                                    | 29.94                                      | .00  | 78.3 - 0.4 | 88   | 16                          | 83       | 70    | 3                      | 74   | 17   | 73            | 70                       | 79                    | 9.20 + 3.8                           | 12                         |        |   |                       |                    |            |       |     |     |     |

TABLE I.—Climatological data for United States Weather Bureau stations, October, 1914—Continued.

| Districts and stations.           | Elevation of instruments.        |                           | Pressure in inches.      |                                       | Temperature of the air, in degrees Fahrenheit. |                        |                           |          |       | Precipitation, inches. |               | Wind.                 |        |                        |                         | Average cloudiness, tenth. | Total snowfall.       | Snow on ground at end of month. |            |       |         |        |
|-----------------------------------|----------------------------------|---------------------------|--------------------------|---------------------------------------|--|------------------------|---------------------------|----------|-------|------------------------|---------------|-----------------------|--------|------------------------|-------------------------|----------------------------|-----------------------|---------------------------------|------------|-------|---------|--------|
|                                   | Barometer above sea level, feet. | Thermometer above ground. | Anemometer above ground. | Station, reduced to mean of 24 hours. | Sea level, reduced to mean of 24 hours.        | Departure from normal. | Mean max + mean min. + 2. | Maximum. | Date. | Mean maximum.          | Mean minimum. | Greatest daily range. | Total. | Departure from normal. | Days with 0.01 or more. | Total movement, miles.     | Prevailing direction. | Maximum velocity.               |            |       |         |        |
| <i>Ohio Valley and Tennessee.</i> |                                  |                           |                          |                                       |  |                        |                           |          |       |                        |               |                       |        |                        |                         |                            |                       |                                 | 5.9        |       |         |        |
| Chattanooga                       | 762                              | 189                       | 213                      | 29.28                                 | 30.10  | + .01                  | 62.4                      | + 1.6    | 83    | 8                      | 71            | 31                    | 28     | 54                     | 31                      | 55                         | 32                    | 75                              | 2.93 + 0.1 | 6     | 4,185   | w. ne. |
| Knoxville                         | 996                              | 93                        | 100                      | 29.03                                 | 30.08  | - .01                  | 61.2                      | + 3.1    | 84    | 9                      | 70            | 28                    | 28     | 52                     | 32                      | 53                         | 31                    | 81                              | 3.57 + 1.0 | 7     | 3,137   | n. w.  |
| Memphis                           | 399                              | 76                        | 97                       | 29.67                                 | 30.10  | + .03                  | 63.3                      | + 0.8    | 83    | 9                      | 71            | 35                    | 27     | 56                     | 33                      | 57                         | 54                    | 77                              | 1.81 - 0.9 | 10    | 5,275   | s. w.  |
| Nashville                         | 516                              | 168                       | 191                      | 29.50                                 | 30.09  | + .01                  | 61.9                      | + 1.6    | 83    | 1                      | 71            | 23                    | 23     | 53                     | 25                      | 53                         | 26                    | 78                              | 2.80 + 0.3 | 8     | 5,084   | n. e.  |
| Lexington                         | 989                              | 75                        | 102                      | 29.00                                 | 30.07  | - .01                  | 58.9                      | + 2.4    | 84    | 7                      | 67            | 26                    | 27     | 51                     | 25                      | 56                         | 33                    | 81                              | 3.32 + 3.1 | 11    | 5,738   | n.     |
| Louisville                        | 525                              | 219                       | 255                      | 29.50                                 | 30.09  | + .01                  | 60.7                      | + 2.3    | 84    | 6                      | 69            | 30                    | 27     | 52                     | 26                      | 55                         | 53                    | 81                              | 1.42 - 0.2 | 10    | 6,592   | w.     |
| Evansville                        | 431                              | 72                        | 82                       | 29.60                                 | 30.07  | .00                    | 60.8                      | + 2.8    | 84    | 6                      | 69            | 30                    | 27     | 53                     | 24                      | 56                         | 51                    | 78                              | 2.75 - 0.4 | 11    | 4,281   | s.     |
| Indianapolis                      | 822                              | 154                       | 164                      | 29.19                                 | 30.08  | + .01                  | 58.4                      | + 3.4    | 84    | 6                      | 67            | 29                    | 27     | 50                     | 30                      | 52                         | 49                    | 75                              | 1.67 - 1.1 | 6     | 5,346   | sw.    |
| Terre Haute                       | 575                              | 96                        | 129                      | 29.44                                 | 30.06  | .00                    | 59.0                      | + 2.5    | 84    | 6                      | 68            | 28                    | 27     | 50                     | 30                      | 53                         | 50                    | 80                              | 2.46 -     | 7     | 5,533   | s.     |
| Cincinnati                        | 628                              | 152                       | 160                      | 29.40                                 | 30.08  | .00                    | 60.5                      | + 3.5    | 84    | 6                      | 68            | 27                    | 27     | 52                     | 28                      | 54                         | 51                    | 77                              | 2.59 + 1.3 | 9     | 3,730   | se.    |
| Columbus                          | 824                              | 173                       | 222                      | 29.31                                 | 30.09  | + .01                  | 57.7                      | + 3.6    | 82    | 5                      | 66            | 25                    | 27     | 49                     | 30                      | 53                         | 48                    | 75                              | 4.44 + 2.1 | 13    | 6,745   | se.    |
| Dayton                            | 899                              | 181                       | 216                      | 29.10                                 | 30.06  | .00                    | 58.4                      | + 4.3    | 84    | 6                      | 67            | 28                    | 27     | 50                     | 33                      | 52                         | 49                    | 78                              | 3.48 + 1.1 | 14    | 6,067   | s.     |
| Pittsburgh                        | 842                              | 353                       | 410                      | 29.19                                 | 30.10  | + .02                  | 58.4                      | + 3.5    | 84    | 10                     | 67            | 30                    | 27     | 50                     | 30                      | 51                         | 47                    | 73                              | 3.07 + 0.7 | 15    | 7,165   | w.     |
| Elkins                            | 1,940                            | 41                        | 50                       | 28.06                                 | 30.13  | + .03                  | 55.2                      | + 3.8    | 86    | 1                      | 67            | 24                    | 23     | 44                     | 40                      | 48                         | 45                    | 85                              | 2.25 - 0.2 | 15    | 2,305   | w.     |
| Parkersburg                       | 638                              | 77                        | 84                       | 29.45                                 | 30.11  | + .03                  | 59.2                      | + 4.6    | 84    | 6                      | 69            | 29                    | 27     | 49                     | 33                      | 52                         | 48                    | 77                              | 2.91 + 0.5 | 11    | 3,126   | se.    |
| <i>Lower Lake Region.</i>         |                                  |                           |                          |                                       |  |                        |                           |          |       |                        |               |                       |        |                        |                         |                            |                       | 5.7                             |            |       |         |        |
| Buffalo                           | 767                              | 247                       | 280                      | 29.24                                 | 30.08  | + .03                  | 55.2                      | + 3.4    | 78    | 10                     | 63            | 28                    | 27     | 49                     | 28                      | 51                         | 49                    | 84                              | 1.80 - 1.7 | 10    | 11,679  | sw.    |
| Canton                            | 448                              | 10                        | 61                       | 29.59                                 | 30.07  | .00                    | 50.4                      | + 3.2    | 70    | 9                      | 60            | 24                    | 14     | 40                     | 37                      | 48                         | 76                    | 1.82 - 1.5                      | 12         | 7,281 | sw.     |        |
| Oswego                            | 325                              | 78                        | 91                       | 24.70                                 | 30.07  | + .02                  | 53.2                      | + 2.0    | 70    | 9                      | 61            | 30                    | 27     | 46                     | 25                      | 48                         | 76                    | 1.34 - 2.0                      | 10         | 6,908 | s.      |        |
| Rochester                         | 523                              | 9                         | 113                      | 29.52                                 | 30.10  | + .05                  | 54.6                      | + 3.5    | 81    | 9                      | 63            | 30                    | 27     | 47                     | 30                      | 49                         | 45                    | 76                              | 2.04 - 0.8 | 10    | 5,378   | sw.    |
| Syracuse                          | 587                              | 97                        | 129                      | 29.45                                 | 30.10  | + .04                  | 53.8                      | + 2.8    | 70    | 13                     | 62            | 23                    | 27     | 46                     | 27                      | 48                         | 76                    | 2.21 - 2.0                      | 12         | 6,925 | s.      |        |
| Erie                              | 714                              | 92                        | 102                      | 29.30                                 | 30.08  | + .03                  | 56.2                      | + 3.1    | 81    | 10                     | 63            | 32                    | 27     | 50                     | 23                      | 51                         | 46                    | 74                              | 3.50 - 0.3 | 12    | 7,130   | s.     |
| Cleveland                         | 762                              | 190                       | 201                      | 29.26                                 | 30.08  | + .02                  | 56.8                      | + 3.7    | 78    | 8                      | 63            | 33                    | 28     | 51                     | 28                      | 52                         | 49                    | 79                              | 3.39 - 0.3 | 9     | 9,113   | se.    |
| Sandusky                          | 629                              | 62                        | 103                      | 29.39                                 | 30.08  | + .02                  | 57.2                      | + 3.3    | 80    | 8                      | 64            | 33                    | 27     | 50                     | 26                      | 52                         | 49                    | 80                              | 1.58 - 0.8 | 12    | 8,165   | sw.    |
| Toledo                            | 628                              | 208                       | 246                      | 29.40                                 | 30.09  | + .04                  | 56.5                      | + 3.9    | 80    | 21                     | 64            | 26                    | 27     | 48                     | 27                      | 52                         | 49                    | 82                              | 2.68 + 0.4 | 9     | 9,601   | sw.    |
| Detroit                           | 730                              | 215                       | 245                      | 29.28                                 | 30.08  | + .03                  | 56.3                      | + 2.6    | 81    | 6                      | 64            | 25                    | 27     | 47                     | 29                      | 51                         | 48                    | 79                              | 2.76 - 0.3 | 10    | 8,301   | sw.    |
| <i>Upper Lake Region.</i>         |                                  |                           |                          |                                       |  |                        |                           |          |       |                        |               |                       |        |                        |                         |                            |                       | 5.8                             |            |       |         |        |
| Alpena                            | 609                              | 13                        | 92                       | 29.40                                 | 30.07  | + .04                  | 51.4                      | + 5.5    | 78    | 20                     | 58            | 26                    | 27     | 45                     | 35                      | 48                         | 45                    | 84                              | 2.92 - 0.5 | 11    | 7,204   | se.    |
| Escanaba                          | 612                              | 54                        | 60                       | 29.38                                 | 30.05  | + .04                  | 51.3                      | + 6.3    | 70    | 21                     | 59            | 23                    | 27     | 44                     | 24                      | 48                         | 45                    | 84                              | 0.55 - 2.5 | 8     | 6,608   | ne.    |
| Grand Haven                       | 632                              | 54                        | 92                       | 29.37                                 | 30.05  | + .02                  | 54.8                      | + 4.6    | 78    | 7                      | 62            | 29                    | 26     | 48                     | 29                      | 51                         | 48                    | 83                              | 2.55 + 0.1 | 10    | 7,422   | w.     |
| Grand Rapids                      | 707                              | 70                        | 57                       | 29.29                                 | 30.06  | + .02                  | 56.5                      | + 6.4    | 72    | 65                     | 75            | 28                    | 27     | 48                     | 29                      | 51                         | 48                    | 80                              | 2.72 + 0.2 | 9     | 3,779   | e.     |
| Houghton                          | 684                              | 82                        | 72                       | 29.30                                 | 30.03  | + .03                  | 51.8                      | + 6.5    | 80    | 4                      | 60            | 25                    | 26     | 43                     | 30                      | 31                         | 18                    | 20                              | 0          | 8     | 5,656   | w.     |
| Lansing                           | 878                              | 11                        | 62                       | 29.12                                 | 30.07  | .00                    | 54.6                      | + 5.9    | 91    | 7                      | 65            | 23                    | 27     | 44                     | 38                      | 48                         | 46                    | 87                              | 2.81 + 0.6 | 11    | 3,546   | sw.    |
| Ludington                         | 637                              | 60                        | 66                       | 29.35                                 | 30.05  | .00                    | 54.5                      | + 5.7    | 76    | 6                      | 61            | 20                    | 26     | 48                     | 27                      | 51                         | 49                    | 86                              | 3.00 - 0   | 11    | 2,202   | s.     |
| Marquette                         | 734                              | 77                        | 111                      | 29.26                                 | 30.07  | + .06                  | 52.9                      | + 5.4    | 80    | 20                     | 61            | 25                    | 27     | 45                     | 35                      | 47                         | 43                    | 77                              | 1.03 - 2.2 | 9     | 7,185   | sw.    |
| Port Huron                        | 638                              | 70                        | 120                      | 29.37                                 | 30.08  | + .02                  | 54.0                      | + 4.5    | 73    | 21                     | 62            | 25                    | 27     | 46                     | 35                      | 50                         | 47                    | 81                              | 1.66 - 1.1 | 11    | 7,341   | sw.    |
| Saginaw                           | 641                              | 48                        | 82                       | 29.37                                 | 30.07  | .00                    | 54.6                      | + 5.7    | 79    | 7                      | 61            | 24                    | 27     | 45                     | 33                      | 50                         | 48                    | 87                              | 1.75 - 1.0 | 9     | 5,785   | s.     |
| Sault Sainte Marie                | 614                              | 11                        | 61                       | 29.37                                 | 30.07  | + .06                  | 50.2                      | + 6.8    | 79    | 5                      | 58            | 23                    | 27     | 42                     | 30                      | 46                         | 43                    | 85                              | 1.47 - 1.9 | 12    | 5,261   | e.     |
| Chicago                           | 823                              | 310                       | 29.17                    | 30.06                                 | + .02  | 54.9                   | + 6.2                     | 81       | 7     | 65                     | 24            | 27                    | 45     | 34                     | 51                      | 50                         | 75                    | 2.94 + 0.3                      | 11         | 7,810 | sw.     |        |
| Green Bay                         | 617                              | 109                       | 149                      | 29.38                                 | 30.01  | + .02                  | 54.8                      | + 7.7    | 79    | 5                      | 63            | 23                    | 27     | 46                     | 31                      | 49                         | 46                    | 81                              | 1.73 - 0.6 | 11    | 7,902   | s.     |
| Milwaukee                         | 681                              | 131                       | 133                      | 29.31                                 | 30.05  | + .02                  | 56.2                      | + 6.0    | 80    | 4                      | 56            | 20                    | 25     | 50                     | 31                      | 52                         | 48                    | 80                              | 2.75 + 2.4 | 10    | 6,865   | sw.    |
| Duluth                            | 1,133                            | 11                        | 47                       | 28.82                                 | 30.05  | + .05                  | 49.2                      | + 4.0    | 78    | 4                      | 56            | 20                    | 25     | 42                     | 29                      | 45                         | 43                    | 88                              | 1.14 - 1.6 | 7     | 9,606   | ne.    |
| <i>North Dakota.</i>              |                                  |                           |                          |                                       |  |                        |                           |          |       |                        |               |                       |        |                        |                         |                            |                       | 4.6                             |            |       |         |        |
| Moorhead                          | 940                              | 8                         | 57                       | 28.99                                 | 30.02  | + .02                  | 52.8                      | + 10.0   | 86    | 1                      | 65            | 21                    | 27     | 41                     | 39                      | 46                         | 43                    | 80                              | 0.99 - 1.1 | 7     | 6,203   | se.    |
| Bismarck                          | 1,674                            | 8                         | 57                       | 28.24                                 | 30.04  | + .05                  | 51.0                      | + 6.9    | 89    | 1                      | 65            | 21                    | 23     | 37                     | 48                      | 42                         | 73                    | 0.79 - 0.2                      | 8          | 6,582 | nw.     |        |
| Devils Lake                       | 1,482                            | 11                        | 44                       | 28.39                                 | 29.97  | + .07                  | 50.8                      | + 10.3   | 89    | 1                      | 62            | 19                    | 28     | 39                     | 31                      | 42                         | 38                    | 74                              | 1.15 - 0.1 | 10    | 7,421   | sw.    |
| Williston                         | 1,872                            | 40                        | 47                       | 27.98                                 | 29.98  | .00                    | 48.8                      | + 5.9    | 83    | 17                     | 62            | 17                    | 26     | 36                     | 45                      | 41                         | 68                    | 0.38 - 0.4                      | 6          | 4,262 | sw.     |        |
| <i>Upper Mississippi Valley.</i>  |                                  |                           |                          |                                       |  |                        |                           |          |       |                        |               |                       |        |                        |                         |                            |                       | 5.0                             |            |       |         |        |
| Minneapolis                       | 918                              | 10                        | 206                      | 29.03                                 | 30.00  | .00                    | 55.4                      | + 8.1    | 81    | 1                      | 65            | 26                    | 27     | 46                     | 39                      | 51                         | 52                    | 81                              | 2.96 + 0.5 | 10    | 8,187   | s.     |
| St. Paul                          | 837                              | 201                       | 256                      | 29.12                                 | 30.03  | + .02                  | 55.4                      | + 7.3    | 80    | 1                      | 65            | 24                    | 27     | 46                     | 32                      | 51                         | 52                    | 81                              | 0.58 - 0.5 | 7     | 8,092   | s.     |
| La Crosse                         | 714                              | 11                        | 48                       | 29.27                                 | 30.05  | + .03                  | 56.0                      | + 6.1    | 79    | 20                     | 68            | 24                    | 27     | 46                     | 31                      | 52                         | 47                    | 80                              | 3.00 + 0.7 | 9     | 3,511   | s.     |
| Madison                           | 974                              | 70                        | 78                       | 29.01                                 | 30.06  | + .03                  | 55.4                      | + 6.8    | 78    | 6                      | 64            | 25                    | 27     | 47                     | 27                      | 50                         | 48                    | 87                              | 3.98 + 1.9 | 10    | 6,732   | s.     |
| Charles City                      | 1,015                            | 10                        | 49                       | 28.96                                 | 30.05  | + .03                  | 54.9                      | + 6.7    | 79    | 1                      | 65            | 22                    | 27     | 45                     | 33                      | 50                         | 48                    | 87                              | 2.15 - 0.2 | 9     | 4,665   | se.    |
| Davenport                         | 606                              | 71                        | 79                       | 29.39                                 | 30.05  | + .01                  | 58.0                      | + 5.4    | 81    | 6                      | 67            | 25                    | 27     | 49                     | 29                      | 52                         | 49                    | 80                              | 2.15 - 0.2 | 9     | 4,180   | e.     |
| Des Moines                        | 861                              | 84                        | 97                       | 29.11                                 | 30.02  | + .01                  | 57.4                      | + 4.9    | 79    | 1                      | 64            | 24                    | 27     | 48                     | 31                      | 52                         | 49                    | 80                              | 3.37 + 0.9 | 10    | 5,270   | sw.    |
| Dubuque                           | 698                              | 81                        | 96                       | 29.31                                 | 30.06  | + .02                  | 56.7                      | + 4.7    | 78    | 6                      | 65            | 26                    | 27     | 48                     | 28                      | 50                         | 47                    | 78                              | 2.88 + 0.2 | 10    | 3,760   | s.     |
| Keokuk                            | 614                              | 64                        | 78                       | 29.38                                 | 30.06  | + .01                  | 58.8                      | + 4.3    | 83    | 6                      | 68            | 24                    | 27     | 50                     | 30                      | 53                         | 50                    | 80                              | 1.65 - 0.8 | 10    | 4,213</ |        |

TABLE I.—Climatological data for United States Weather Bureau stations, October, 1914—Continued.

| Districts and stations.  | Elevation of instruments.       |                           | Pressure in inches.      |                                      |  |                        | Temperature of the air, in degrees Fahrenheit. |                        |          |       | Precipitation, inches. |          |               |                       | Wind.                 |        |                        |                         | Average cloudiness, tenths. |                       | Snow on ground at end of month. |            |       |     |     |    |     |     |      |     |    |
|--------------------------|---------------------------------|---------------------------|--------------------------|--------------------------------------|--|------------------------|--|------------------------|----------|-------|------------------------|----------|---------------|-----------------------|-----------------------|--------|------------------------|-------------------------|-----------------------------|-----------------------|---------------------------------|------------|-------|-----|-----|----|-----|-----|------|-----|----|
|                          | Baometer above sea level, feet. | Thermometer above ground. | Anemometer above ground. | Station reduced to mean of 24 hours. | Sea level reduced to mean of 24 hours. | Departure from normal. | Mean max. + mean min. + <sub>2</sub>           | Departure from normal. | Maximum. | Date. | Mean maximum.          | Minimum. | Mean minimum. | Greatest daily range. | Mean wet thermometer. | Total. | Departure from normal. | Days with 0.01 or more. | Total movement, miles.      | Prevailing direction. | Miles per hour.                 | Direction. | Date. |     |     |    |     |     |      |     |    |
|                          |                                 |                           |                          |                                      |  |                        |  |                        |          |       |                        |          |               |                       |                       |        |                        |                         |                             |                       |                                 |            |       |     |     |    |     |     |      |     |    |
| <b>Northern Slope.</b>   |                                 |                           |                          |                                      |  |                        | 47.3   | + 2.6                  |          |       |                        |          |               |                       | 70                    | 1.67   | + 0.4                  |                         |                             |                       |                                 |            |       |     | 5.4 |    |     |     |      |     |    |
| Hayre.....               | 2,505                           | 11                        | 44                       | 27.33                                | 29.99                                  | + 0.01                 | 46.2   | + 2.6                  | 79       | 16    | 57                     | 25       | 29            | 35                    | 41                    | 41     | 2.82                   | + 2.3                   | 12                          | 5,568                 | sw.                             | 32         | s.    | 2   | 9   | 9  | 13  | 6.3 | 9.4  |     |    |
| Helena.....              | 4,110                           | 87                        | 114                      | 25.82                                | 30.05                                  | + .02                  | 44.6   | + 0.6                  | 71       | 16    | 53                     | 20       | 8             | 36                    | 39                    | 35     | .208                   | + 1.3                   | 11                          | 4,795                 | sw.                             | 32         | sw.   | 18  | 6   | 6  | 16  | 6.3 | 13.1 |     |    |
| Kalispell.....           | 2,982                           | 11                        | 34                       | 26.85                                | 30.04                                  | + .03                  | 43.2   | + 0.7                  | 68       | 1     | 51                     | 28       | 24            | 36                    | 29                    | 39     | 37                     | .85                     | + 2.2                       | 14                    | 1,884                           | sw.        | 16    | sw. | 19  | 6  | 6   | 9   | 6.9  | 1.1 |    |
| Miles City.....          | 2,371                           | 26                        | 18                       | 27.49                                | 30.06                                  | + .06                  | 51.2   | + 4.7                  | 84       | 15    | 64                     | 30       | 13            | 33                    | 43                    | 43     | 1.96                   | + 1.2                   | 6                           | 3,139                 | s.                              | 20         | nw.   |     | 4   | 16 | 9   | 6   | 4.2  |     |    |
| Rapid City.....          | 3,259                           | 50                        | 53                       | 26.63                                | 30.06                                  | + .05                  | 51.2   | + 4.6                  | 83       | 1     | 63                     | 27       | 14            | 39                    | 39                    | 42     | .34                    | + 0.6                   | 4                           | 5,953                 | w.                              | 31         | s.    | 21  | 13  | 6  | 12  | 5.0 | T.   |     |    |
| Cheyenne.....            | 6,088                           | 84                        | 101                      | 21.05                                | 30.02                                  | + .01                  | 47.6   | + 2.3                  | 74       | 16    | 59                     | 20       | 13            | 36                    | 38                    | 38     | .31                    | .60                     | 7                           | 1,817                 | w.                              | 40         | w.    | 10  | 10  | 13 | 8   | 5.0 |      |     |    |
| Lander.....              | 5,372                           | 60                        | 68                       | 21.88                                | 30.06                                  | + .02                  | 47.2   | + 5.1                  | 76       | 1     | 62                     | 25       | 4             | 32                    | 43                    | 37     | .29                    | .57                     | 0.42                        | + 0.6                 | 6                               | 3,143      | sw.   | 33  | sw. |    |     |     |      | 5.1 | T. |
| Sheridan.....            | 3,790                           | 10                        | 47                       | 26.13                                | 30.06                                  |                        | 46.6   |                        | 81       | 16    | 63                     | 21       | 26            | 30                    | 51                    | 37     | .31                    | .67                     | .65                         |                       | 4                               | 2,306      | s.    | 27  | nw. |    |     |     |      | 5.8 |    |
| Yellowstone Park.....    | 6,200                           | 11                        | 48                       | 23.91                                | 30.07                                  | + .05                  | 42.0   | + 0.5                  | 68       | 15    | 53                     | 23       | 7             | 31                    | 38                    | 35     | .31                    | .73                     | 1.51                        | + 0.4                 | 12                              | 5,165      | s.    | 36  | s.  | 2  | 9   | 9   | 13   | 5.8 |    |
| North Platte.....        | 2,821                           | 11                        | 51                       | 27.13                                | 30.07                                  | + .05                  | 53.4   | + 3.4                  | 87       | 17    | 68                     | 26       | 15            | 39                    | 50                    | 44     | .38                    | .70                     | .92                         | + 0.2                 | 4                               | 5,416      | n.    | 25  | n.  | 23 | 15  | 7   | 9    | 4.1 |    |
| <b>Middle Slope.</b>     |                                 |                           |                          |                                      |  |                        | 57.4   | + 1.8                  |          |       |                        |          |               |                       | 66                    | 1.75   | + 0.3                  |                         |                             |                       |                                 |            |       |     |     |    | 4.8 |     |      |     |    |
| Denver.....              | 5,291                           | 129                       | 172                      | 24.76                                | 30.02                                  | + .01                  | 53.2   | + 2.2                  | 79       | 3     | 67                     | 30       | 14            | 40                    | 39                    | 42     | .82                    | .58                     | 6                           | 5,500                 | sw.                             | 38         | nw.   | 4   | 16  | 11 | 4   | 3.5 | 0.8  |     |    |
| Pueblo.....              | 4,685                           | 50                        | 88                       | 25.32                                | 30.01                                  | + .02                  | 53.6   | + 1.3                  | 83       | 17    | 69                     | 33       | 25            | 14                    | 51                    | 42     | .34                    | .56                     | 1.66                        | + 1.0                 | 4                               | 3,969      | nw.   | 29  | sw. | 4  | 15  | 13  | 7    | 3.4 | T. |
| Concordia.....           | 1,395                           | 42                        | 50                       | 28.57                                | 30.05                                  | + .02                  | 58.6   | + 3.2                  | 83       | 6     | 69                     | 23       | 27            | 48                    | 40                    | 50     | .46                    | .74                     | 2.49                        | + 0.5                 | 5                               | 5,288      | s.    | 24  | se. | 3  | 11  | 8   | 5    | 3.3 |    |
| Dodge.....               | 2,509                           | 11                        | 51                       | 27.45                                | 30.05                                  | + .03                  | 57.8   | + 3.1                  | 87       | 6     | 71                     | 25       | 44            | 46                    | 45                    | 42     | .67                    | .87                     | 0.43                        | + 1.0                 | 5                               | 8,057      | s.    | 33  | nw. | 11 | 13  | 8   | 9    | 4.5 |    |
| Wichita.....             | 1,358                           | 139                       | 158                      | 28.59                                | 30.02                                  | - .01                  | 59.3   | + 0.5                  | 80       | 8     | 68                     | 28       | 27            | 50                    | 51                    | 53     | .49                    | .74                     | 1.38                        | + 0.9                 | 9                               | 9,157      | s.    | 42  | n.  | 9  | 14  | 8   | 9    | 5.6 |    |
| Oklahoma.....            | 1,214                           | 10                        | 47                       | 28.76                                | 30.05                                  | + .02                  | 61.6   | + 0.3                  | 88       | 9     | 71                     | 28       | 27            | 52                    | 43                    | 51     | .50                    | .74                     | 1.50                        | + 0.3                 | 4                               | 9,719      | s.    | 36  | n.  | 26 | 10  | 3   | 13   | 5.6 |    |
| <b>Southern Slope.</b>   |                                 |                           |                          |                                      |  |                        | 62.6   | + 0.2                  |          |       |                        |          |               |                       | 66                    | 1.75   | + 0.3                  |                         |                             |                       |                                 |            |       |     |     |    | 4.8 |     |      |     |    |
| Abilene.....             | 1,738                           | 10                        | 52                       | 28.22                                | 30.02                                  | + .01                  | 63.8   | - 0.4                  | 92       | 9     | 75                     | 33       | 27            | 52                    | 41                    | 55     | .51                    | .73                     | 4.08                        | + 1.8                 | 5                               | 6,226      | s.    | 25  | s.  | 4  | 10  | 9   | 12   | 5.3 |    |
| Amarillo.....            | 3,676                           | 10                        | 49                       | 26.35                                | 30.02                                  | + .02                  | 62.8   | + 0.1                  | 95       | 17    | 71                     | 30       | 27            | 45                    | 41                    | 48     | .43                    | .71                     | 4.46                        | + 2.8                 | 7                               | 8,181      | s.    | 30  | s.  | 20 | 10  | 12  | 9    | 4.9 |    |
| Del Rio.....             | 914                             | 64                        | 71                       | 28.99                                | 29.97                                  | - .01                  | 70.0   | + 0.1                  | 93       | 8     | 80                     | 41       | 15            | 60                    | 36                    | 6.67   |                        | .71                     | 7                           | 6,595                 | s.                              | 38         | se.   | 20  | 14  | 9  | 8   | 4.2 |      |     |    |
| Roswell.....             | 3,566                           | 75                        | 85                       | 26.40                                | 30.00                                  | + .04                  | 58.4   | + 1.1                  | 86       | 2     | 72                     | 32       | 28            | 44                    | 44                    | 46     | .35                    | .53                     | 3.37                        | + 1.8                 | 7                               | 5,118      | s.    | 26  | nw. | 19 | 14  | 9   | 8    | 4.2 |    |
| <b>Southern Plateau.</b> |                                 |                           |                          |                                      |  |                        | 60.1   | + 0.3                  |          |       |                        |          |               |                       | 54                    | 1.36   | + 0.7                  |                         |                             |                       |                                 |            |       |     |     |    | 2.8 |     |      |     |    |
| El Paso.....             | 3,672                           | 110                       | 133                      | 26.20                                | 29.93                                  | + .01                  | 63.5   | + 1.1                  | 88       | 11    | 75                     | 43       | 28            | 52                    | 34                    | 50     | .39                    | .49                     | 0.80                        | + 0.2                 | 5                               | 7,064      | se.   | 48  | s.  | 3  | 20  | 6   | 5    | 3.6 |    |
| Santa Fe.....            | 7,013                           | 57                        | 62                       | 23.31                                | 30.01                                  | + .05                  | 49.4   | + 0.6                  | 73       | 1     | 60                     | 31       | 23            | 39                    | 28                    | 39     | .32                    | .61                     | 2.40                        | + 1.3                 | 10                              | 4,764      | se.   | 29  | se. | 3  | 20  | 5   | 6    | 3.5 |    |
| Flagstaff.....           | 6,908                           | 8                         | 57                       |                                      |  |                        | 45.6   | + 0.9                  | 69       | 13    | 59                     | 26       | 27            | 32                    | 42                    | 42     | .44                    | .60                     | 1.73                        |                       | 6                               |            | e.    | 36  | ne. | 23 | 16  | 9   | 6    | 2.5 |    |
| Phoenix.....             | 1,108                           | 76                        | 81                       | 28.73                                | 29.88                                  | + .01                  | 72.1   | + 1.0                  | 96       | 1     | 84                     | 50       | 23            | 59                    | 36                    | 58     | .48                    | .49                     | 2.30                        | + 2.0                 | 5                               | 3,985      | e.    | 25  | w.  | 21 | 21  | 5   | 5    | 2.5 |    |
| Yuma.....                | 141                             | 9                         | 58                       | 29.71                                | 29.86                                  | + .01                  | 73.6   | + 1.2                  | 99       | 1     | 84                     | 49       | 23            | 60                    | 38                    | 60     | .51                    | .53                     | 0.89                        | + 0.7                 | 3                               | 3,204      | ne.   | 22  | w.  | 21 | 27  | 2   | 1    | 2.1 |    |
| Independence.....        | 3,910                           | 11                        | 42                       | 25.95                                | 29.92                                  | - .03                  | 57.2   | + 2.1                  | 82       | 14    | 72                     | 38       | 13            | 42                    | 42                    | 47     | .40                    | .59                     | 0.03                        | - 0.3                 | 1                               | 4,017      | se.   | 33  | se. | 2  | 19  | 8   | 4    | 3.4 |    |
| <b>Middle Plateau.</b>   |                                 |                           |                          |                                      |  |                        | 51.9   | + 1.4                  |          |       |                        |          |               |                       | 56                    | 1.59   | + 0.7                  |                         |                             |                       |                                 |            |       |     |     |    | 3.6 |     |      |     |    |
| Reno.....                | 4,532                           | 74                        | 81                       | 25.47                                | 29.97                                  |                        | 51.8   | + 2.1                  | 80       | 15    | 67                     | 27       | 22            | 37                    | 43                    | 43     | .33                    | .54                     | 0.18                        | + 0.2                 | 3                               | 4,214      | w.    | 31  | w.  | 19 | 16  | 9   | 6    | 3.6 |    |
| Tonopah.....             | 6,060                           | 13                        | 20                       | 24.68                                | 29.95                                  |                        | 53.2   |                        | 73       | 13    | 62                     | 31       | 22            | 44                    | 24                    | 42     | .32                    | .46                     | 0.00                        | + 0.8                 | 0                               | 6,268      | se.   | 36  | nw. | 19 | 15  | 5   | 11   | 4.5 |    |
| Winnemucca.....          | 1,344                           | 18                        | 56                       | 25.62                                | 30.01                                  | - .04                  | 50.2   | + 1.6                  | 84       | 14    | 64                     | 36       | 27            | 42                    | 34                    | 44     | .41                    | .60                     | 0.63                        | + 1.1                 | 6                               | 4,181      | ne.   | 28  | sw. | 2  | 20  | 10  | 3    | 2.9 |    |
| Modena.....              | 5,475                           | 10                        | 43                       | 24.64                                | 29.98                                  | + .02                  | 49.9   | + 0.2                  | 73       | 1     | 66                     | 29       | 5             | 34                    | 41                    | 40     | .30                    | .53                     | 0.30                        | + 0.5                 | 3                               | 7,401      | w.    | 50  | s.  | 27 | 21  | 5   | 10   | 4.9 |    |
| Salt Lake City.....      | 4,360                           | 147                       | 189                      | 25.63                                | 29.99                                  | - .02                  | 55.8   | + 3.6                  | 76       | 1     | 65                     | 35       | 4             | 46                    | 27                    | 47     | 41                     | .62                     | 2.61                        | + 1.2                 | 8                               | 5,552      | se.   | 37  | e.  | 24 | 14  | 7   | 10   | 4.9 |    |
| Durango.....             | 6,516                           | 10                        | 50                       | 25.42                                | 30.00                                  | + .01                  | 48.6   | + 0.3                  | 74       | 20    | 65                     | 35       | 31            | 42                    | 33                    | 45     | .38                    | .61                     | 5.55                        | + 3.8                 | 6                               | 5,028      | e.    | 35  | w.  | 20 | 20  | 6   | 5    | 3.9 |    |
| Grand Junction.....      | 4,602                           | 82                        | 96                       | 25.42                                | 30.00                                  | + .01                  | 53.6   | + 0.3                  | 74       | 20    | 65                     | 35       | 31            | 42                    | 33                    | 45     | .38                    | .61                     | 1.89                        | + 1.0                 | 6                               | 5,028      | e.    | 35  | w.  | 8  | 15  | 10  | 8    | 3.9 |    |
| <b>Northern Plateau.</b> |                                 |                           |                          |                                      |  |                        | 52.0   | + 2.6                  |          |       |                        |          |               |                       | 68                    | 1.59   | + 0.5                  |                         |                             |                       |                                 |            |       |     |     |    | 5.7 |     |      |     |    |
| Baker.....               | 3,471                           | 48                        | 53                       | 26.45                                | 30.04                                  | + .04                  | 49.4   | + 3.9                  | 79       | 15    | 61                     | 30       | 11            | 38                    | 35                    | 42     | .35                    | .64                     | 1.14                        | + 0.2                 | 7                               | 4,980      | se.   | 27  | s.  | 16 | 9   | 14  | 8    | 4.8 |    |
| Boise.....               | 2,739                           | 78                        | 86                       | 27.18                                | 30.04                                  | + .02                  | 54.4   | + 4.1                  | 83       | 14    | 65                     | 34       | 4             | 44                    | 37                    | 46     | .39                    | .61                     | 1.20                        | + 0.1                 | 10                              | 3,195      | nw.   | 25  | se. | 19 | 12  | 7   | 12   | 5.3 |    |
| Lewiston.....            | 757                             | 40                        | 48                       | 29.18                                | 29.99                                  | + .08                  | 53.7   | + 1.9                  | 78       | 14    | 64                     | 36       | 7             | 43                    | 33                    | 43     | .37                    | .68                     | 1.71                        | + 0.5                 | 12                              | 1,604      | e.    | 19  | w.  | 4  | 10  | 6   | 5    | 6.0 |    |
| Pocatello.....           | 4,477                           | 46                        | 54                       | 25.50                                | 30.02                                  | + .02                  | 50.4   | + 2.4                  | 77       | 15    | 61                     | 35       | 23            | 40                    | 36                    | 43     | .37                    | .68                     | 2.02                        | + 1.0                 | 8                               | 4,730      | se.   | 28  | s.  | 19 | 9   | 7   | 15   | 5.6 |    |
| Spokane.....             | 1,920                           | 101                       | 110                      | 27.95                                | 30.01                                  | - .05                  | 49.6   | + 2.3                  | 73       | 16    | 59                     | 33       | 23            | 40                    | 33                    | 45     | .41                    | .74                     | 1.48                        | + 0.0                 | 13                              | 3,704      | ne.   | 26  | s.  | 18 | 5   | 11  | 15   | 6.7 |    |

TABLE II.—Accumulated amounts of precipitation for each five minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any five minutes, or 0.80 in one hour, during October, 1914, at all stations furnished with self-registering gauges.

TABLE II.—Accumulated amounts of precipitation for each five minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any five minutes, or 0.80 in one hour, during October, 1914, at all stations furnished with self-registering gages—Continued.

| Stations.               | Date. | Total duration. |             | Total amount of precipitation. | Excessive rate. |             | Depths of precipitation (in inches) during periods of time indicated. |        |         |         |         |         |         |         |         |         |         |         |         |          |          |  |
|-------------------------|-------|-----------------|-------------|--------------------------------|-----------------|-------------|---|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|--|
|                         |       | From—           | To—         |                                | Began—          | Ended—      | Amount before excessive rate began.                                   | 5 min. | 10 min. | 15 min. | 20 min. | 25 min. | 30 min. | 35 min. | 40 min. | 45 min. | 50 min. | 60 min. | 80 min. | 100 min. | 120 min. |  |
|                         |       |                 |             |                                | .....           | .....       |   | .....  | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    | .....    |  |
| Macon, Ga.              | 6     |                 |             | 0.50                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | 0.37     |  |
| Madison, Wis.           | 23    |                 |             | 0.30                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .29      |  |
| Marquette, Mich.        | 23    |                 |             | 0.21                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .16      |  |
| Memphis, Tenn.          | 20    |                 |             | 0.81                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .34      |  |
| Meridian, Miss.         | 13    |                 |             | 0.83                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .55      |  |
| Miami, Fla.             | 4     | 9.40 a.m.       | 2.10 p.m.   | 1.48                           | 11.18 a.m.      | 12.09 p.m.  | 0.04  | 0.02   | 0.20    | 0.22    | 0.24    | 0.29    | 0.33    | 0.46    | 0.65    | 0.80    | 0.90    |         |         |          | .96      |  |
|                         | 14    | 7.38 a.m.       | 8.24 a.m.   | 0.57                           | 7.46 a.m.       | 8.11 a.m.   | .01   | .09    | .20     | .28     | .37     | .51     | .60     |         |         |         |         |         |         |          |          |  |
|                         | 25-26 | D. N. p. m.     | D. N. a. m. | 0.72                           | 11.14 p. m.     | 11.42 p. m. | .04   | .25    | .35     | .43     | .49     | .58     | .59     |         |         |         |         |         |         |          |          |  |
| Minneapolis, Minn.      | 16    |                 |             | 2.30                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .41      |  |
| Milwaukee, Wis.         | 6-7   | 11.03 p. m.     | D. N. a. m. | 0.44                           | 11.26 p. m.     | 11.42 p. m. | .02   | .05    | .17     | .40     | .41     |         |         |         |         |         |         |         |         |          |          |  |
| Mobile, Ala.            | 5     |                 |             | 0.28                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .28      |  |
| Modena, Utah.           | 3     |                 |             | 0.26                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .10      |  |
| Montgomery, Ala.        | 1-2   | 9.10 p. m.      | 7.55 a. m.  | 1.87                           | 2.20 a. m.      | 2.47 a. m.  | .85   | .06    | .13     | .21     | .38     | .56     | .62     |         |         |         |         |         |         |          |          |  |
| Moorhead, Minn.         | 8     |                 |             | 0.45                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .40      |  |
| Mount Tamalpais, Cal.   | 17    |                 |             | 0.68                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .28      |  |
| Mount Weather, Va.      | 15    |                 |             | 0.81                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .42      |  |
| Nantucket, Mass.        | 17    |                 |             | 0.50                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .28      |  |
| Nashville, Tenn.        | 9     | 12.45 p. m.     | 3.35 p. m.  | 0.54                           | 2.28 p. m.      | 2.48 p. m.  | .04   | .26    | .27     | .36     | .41     |         |         |         |         |         |         |         |         |          | .38      |  |
| New Haven, Conn.        | 16    |                 |             | 2.71                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          |          |  |
| New Orleans, La.        | 11    | 9.20 a. m.      | 11.55 a. m. | 1.81                           | 9.20 a. m.      | 9.50 a. m.  | .00   | .07    | .39     | .93     | 1.37    | 1.58    | 1.72    |         |         |         |         |         |         |          |          |  |
| New York, N. Y.         | 13    | 2.49 p. m.      | 4.39 p. m.  | 1.70                           | 2.52 p. m.      | 3.06 p. m.  | .01   | .24    | .44     | .54     |         |         |         |         |         |         |         |         |         |          | .36      |  |
| Norfolk, Va.            | 16    |                 |             | 0.32                           | 10.35 p. m.     | 10.54 p. m. | .04   | .10    | .38     | .67     | .74     |         |         |         |         |         |         |         |         |          |          |  |
| Northfield, Vt.         | 11-12 | 9.55 p. m.      | D. N. a. m. | 0.61                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .09      |  |
| North Head, Wash.       | 20    |                 |             | 1.84                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .35      |  |
| North Platte, Nebr.     | 4     |                 |             | 0.70                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .29      |  |
| Oklahoma, Okla.         | 6     |                 |             | 0.73                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .49      |  |
| Omaha, Nebr.            | 7     | 9.20 p. m.      | D. N. p. m. | 0.68                           | 9.27 p. m.      | 9.56 p. m.  | .01   | .10    | .27     | .40     | .48     | .54     | .58     |         |         |         |         |         |         |          | (*)      |  |
| Oswego, N. Y.           | 9, 10 | 12.50 p. m.     | 1.40 p. m.  | 0.80                           | 12.55 p. m.     | 1.16 p. m.  | .01   | .08    | .15     | .35     | .77     | .81     |         |         |         |         |         |         |         |          | .40      |  |
| Parkersburg, Tex.       | 12    |                 |             | 0.80                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .68      |  |
| Parkersburg, W. Va.     | 13    |                 |             | 0.68                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .40      |  |
| Pensacola, Fla.         | 11    |                 |             | 0.63                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .38      |  |
| Peoria, Ill.            | 16    |                 |             | 1.33                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .21      |  |
| Philadelphia, Pa.       | 18    |                 |             | 0.67                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .37      |  |
| Phoenix, Ariz.          | 30    |                 |             | 0.67                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .20      |  |
| Pierre, S. Dak.         | 22    |                 |             | 0.58                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .15      |  |
| Pittsburgh, Pa.         | 10    | 3.13 p. m.      | 3.40 p. m.  | 0.29                           | 3.13 p. m.      | 3.18 p. m.  | .00   | .26    |         |         |         |         |         |         |         |         |         |         |         |          | .16      |  |
| Pocatello, Idaho.       | 3     |                 |             | 0.75                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .26      |  |
| Point Reyes Light, Cal. | 17    |                 |             | 0.59                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .34      |  |
| Port Huron, Mich.       | 10    |                 |             | 0.97                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .28      |  |
| Portland, Me.           | 19    |                 |             | 1.06                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .21      |  |
| Portland, Oreg.         | 1     |                 |             | 0.75                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .36      |  |
| Providence, R. I.       | 17    |                 |             | 1.60                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .15      |  |
| Pueblo, Colo.           | 23-24 |                 |             | 1.43                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .16      |  |
| Raleigh, N. C.          | 11    |                 |             | 0.30                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .30      |  |
| Rapid City, S. Dak.     | 22    |                 |             | 0.86                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .30      |  |
| Reading, Pa.            | 16    |                 |             | 1.02                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .17      |  |
| Red Bluff, Cal.         | 9     |                 |             | 0.46                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .41      |  |
| Reno, Nev.              | 29    |                 |             | 0.12                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .04      |  |
| Richmond, Va.           | 16    |                 |             | 0.63                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .31      |  |
| Rochester, N. Y.        | 9     |                 |             | 0.43                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .39      |  |
| Roseburg, Oreg.         | 18    |                 |             | 1.38                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .35      |  |
| Roswell, N. Mex.        | 21    |                 |             | 1.25                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .55      |  |
| Sacramento, Cal.        | 29    |                 |             | 0.29                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .16      |  |
| Saginaw, Mich.          | 18    |                 |             | 1.22                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .33      |  |
| St. Joseph, Mo.         | 8     | 4.16 p. m.      | 4.36 p. m.  | 0.32                           | 4.18 p. m.      | 4.21 p. m.  | .00   | .30    |         |         |         |         |         |         |         |         |         |         |         |          |          |  |
| St. Louis, Mo.          | 8     | 11.38 a. m.     | 6.40 p. m.  | 1.33                           | 1.00 p. m.      | 1.32 p. m.  | .27   | .09    | .26     | .36     | .44     | .51     | .60     | .64     |         |         |         |         |         |          |          |  |
| St. Paul, Minn.         | 10    | 1.15 a. m.      | 4.00 a. m.  | 0.57                           | 1.18 a. m.      | 1.30 a. m.  | .02   | .07    | .29     | .36     |         |         |         |         |         |         |         |         |         |          | .17      |  |
| Salt Lake City, Utah.   | 9     |                 |             | 0.71                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          |          |  |
| San Antonio, Tex.       | 23    | 1.40 a. m.      | 11.30 a. m. | 4.62                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          |          |  |
| San Diego, Cal.         | 3     |                 |             | 0.55                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .14      |  |
| Sand Key, Fla.          | 1     | 6.40 p. m.      | 9.37 p. m.  | 2.24                           | 7.47 p. m.      | 8.47 p. m.  | .32   | .16    | .22     | .33     | .54     | .58     | 1.12    | 1.23    | 1.33    | 1.49    | 1.66    | 1.80    |         |          |          |  |
|                         | 3     | 1.21 a. m.      | 5.55 p. m.  | 3.19                           | 2.36 a. m.      | 2.51 a. m.  | .04   | .08    | .40     | .66     |         |         |         |         |         |         |         |         |         |          |          |  |
|                         | 17    | 4.00 a. m.      | 12.00 m.    | 2.18                           | 5.49 a. m.      | 6.49 a. m.  | .91   | .23    | .60     | .84     | .94     | 1.00    | 1.09    | 1.31    | 1.43    | 1.50    | 1.58    | 1.79    |         |          |          |  |
|                         | 17    |                 |             | 0.29                           | 4.48 a. m.      | 5.30 a. m.  | .03   | .07    | .22     | .47     | .79     | .97     | 1.16    | 1.39    | 1.54    | 1.57    |         |         |         |          |          |  |
| Sandusky, Ohio.         | 8     |                 |             | 0.25                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .08      |  |
| San Francisco, Cal.     | 17    |                 |             | 0.36                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .22      |  |
| San Luis Obispo, Cal.   | 29    |                 |             | 0.04                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .03      |  |
| Santa Fe, N. Mex.       | 4     |                 |             | 0.37                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .29      |  |
| Sault Ste. Marie, Mich. | 10    |                 |             | 0.65                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .24      |  |
| Savannah, Ga.           | 2     | D. N. a. m.     | 5.15 p. m.  | 2.80                           | 10.34 a. m.     | 11.45 a. m. | .52   | .05    | .12     | .16     | .21     | .30     | .41     | .55     | .60     | .73     | .83     | .98     | 1.18    |          |          |  |
|                         | 6     | (10.21 a. m.)   | 1.20 p. m.  | 2.13                           | 11.47 a. m.     | 12.28 p. m. | .07   | .05    | .22     | .48     | .63     | .79     | 1.29    | 1.73    | 1.93    | 2.03    |         |         |         |          |          |  |
|                         | 6     | (3.40 p. m.)    | 5.15 p. m.  | 1.56                           | 3.51 p. m.      | 4.31 p. m.  | .01   | .63    | .99     | 1.16    | 1.22    | 1.27    | 1.32    | 1.45    | 1.52    |         |         |         |         |          |          |  |
| Scranton, Pa.           | 16    |                 |             | 0.66                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .11      |  |
| Seattle, Wash.          | 30    |                 |             | 0.60                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .29      |  |
| Sheridan, Wyo.          | 3     |                 |             | 0.34                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .14      |  |
| Shreveport, La.         | 19    |                 |             | 0.12                           |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          | .07      |  |
| Sioux City, Iowa.       | 6     | 6.45 p. m.      | 8.30 p. m.  | 0.63                           | 7.45 p. m.      | 7.55 p. m.  | .07   | .28    | .55     |         |         |         |         |         |         |         |         |         |         |          |          |  |
|                         | 9     | 7.05 p. m.      | 8.00 p. m.  | 0.95                           | 7.16 p. m.      | 7.36 p. m.  | .01   | .19    | .54     | .82     | .91     |         |         |         |         |         |         |         |         |          |          |  |
| Spokane, Wash.          | 30    |                 |             | 0.                             |                 |             |   |        |         |         |         |         |         |         |         |         |         |         |         |          |          |  |

TABLE II.—Accumulated amounts of precipitation for each five minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any five minutes, or 0.80 in one hour, during October, 1914, at all stations furnished with self-registering gages—Continued.

| Stations.              | Date. | Total duration. |             | Total amount of precipitation. | Excessive rate. |             | Amount before excessive rate began. | Depths of precipitation (in inches) during periods of time indicated. |         |         |         |         |         |         |         |         |         |         |         |          |
|------------------------|-------|-----------------|-------------|--------------------------------|-----------------|-------------|-------------------------------------|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
|                        |       | From—           | To—         |                                | Began—          | Ended.      |                                     | 5 min.  | 10 min. | 15 min. | 20 min. | 25 min. | 30 min. | 35 min. | 40 min. | 45 min. | 50 min. | 60 min. | 80 min. | 100 min. |
| Washington, D. C.      | 16    |                 |             | 1.09                           |                 |             |                                     |   |         |         |         |         |         |         |         |         |         |         | 0.46    |          |
| Wichita, Kans.         | 4     |                 |             | 0.37                           |                 |             |                                     |   |         |         |         |         |         |         |         |         |         | .32     |         |          |
| Williston, N. Dak.     | 4     |                 |             | 0.23                           |                 |             |                                     |   |         |         |         |         |         |         |         |         |         | .08     |         |          |
| Wilmingon, N. C.       | 23-24 | 9.40 a. m.      | D. N. a. M. | 2.50                           | 11.45 a. m.     | 12.19 p. m. | 0.30                                | 0.11  | 0.22    | 0.34    | 0.47    | 0.75    | 1.02    | 1.08    |         |         |         | .09     |         |          |
| Winnemucca, Nev.       | 20    |                 |             | 0.27                           | 1.27            |             |                                     |   |         |         |         |         |         |         |         |         |         | .33     |         |          |
| Wytheville, Va.        | 15    |                 |             | 0.34                           |                 |             |                                     |   |         |         |         |         |         |         |         |         |         | .19     |         |          |
| Yankton, S. Dak.       | 4     |                 |             | 0.48                           |                 |             |                                     |   |         |         |         |         |         |         |         |         |         | (*)     |         |          |
| Yellowstone Park, Wyo. | 2-3   |                 |             |                                |                 |             |                                     |   |         |         |         |         |         |         |         |         |         |         |         |          |

\* Self-register not working.

† Record partly estimated.

‡ No precipitation occurred during month.

TABLE III.—Data furnished by the Canadian Meteorological Service, October, 1914.

| Stations.               | Pressure in inches.                   |   |                        | Temperature.               |                        |               |               |          |         | Precipitation. |                        |                 |
|-------------------------|---------------------------------------|---|------------------------|----------------------------|------------------------|---------------|---------------|----------|---------|----------------|------------------------|-----------------|
|                         | Station, reduced to mean of 24 hours. | Sea level, reduced to mean of 24 hours. | Departure from normal. | Mean max. + mean min. + 2. | Departure from normal. | Mean maximum. | Mean minimum. | Highest. | Lowest. | Total.         | Departure from normal. | Total snowfall. |
| St. Johns, N. F.        | Inches.                               | Inches.                                 | Inches.                | ° F.                       | ° F.                   | ° F.          | ° F.          | ° F.     | ° F.    | Inches.        | Inches.                | Inches.         |
| Sydney, C. B. I.        | 29.74                                 | 29.88                                   | -.03                   | 42.4                       | -3.0                   | 49.2          | 35.7          | 66       | 24      | 5.65           | +0.30                  |                 |
| Halifax, N. S.          | 29.95                                 | 29.99                                   | +.03                   | 46.7                       | +.2                    | 55.2          | 38.2          | 69       | 30      | 1.44           | -3.25                  |                 |
| Yarmouth, N. S.         | 29.93                                 | 30.04                                   | +.04                   | 47.2                       | 0.0                    | 58.7          | 35.7          | 71       | 21      | 1.97           | -3.58                  |                 |
| Charlottetown, P. E. I. | 29.99                                 | 30.06                                   | +.04                   | 48.6                       | +.1                    | 55.4          | 41.9          | 67       | 30      | 2.79           | -1.91                  |                 |
| Chatham, N. B.          | 29.96                                 | 30.00                                   | +.04                   | 47.6                       | +.1                    | 54.8          | 40.3          | 69       | 28      | 3.27           | -1.03                  | T.              |
| Father Point, Que.      | 29.99                                 | 30.01                                   | +.05                   | 46.2                       | +.3                    | 55.7          | 36.8          | 78       | 18      | 3.49           | -0.37                  | 4.0             |
| Quebec, Que.            | 29.96                                 | 29.98                                   | +.03                   | 40.8                       | +.1                    | 47.4          | 34.3          | 57       | 26      | 3.50           | +0.60                  | 2.3             |
| Montreal, Que.          | 29.71                                 | 30.03                                   | +.03                   | 44.8                       | +.2                    | 51.9          | 37.7          | 68       | 23      | 5.17           | +2.02                  | 3.0             |
| Stonecliffe, Ont.       | 29.85                                 | 30.06                                   | +.05                   | 49.0                       | +.4                    | 56.0          | 42.0          | 71       | 24      | 2.39           | -0.74                  | 0.6             |
| Ottawa, Ont.            | 29.45                                 | 30.06                                   | +.05                   | 48.6                       | +.3                    | 57.8          | 35.5          | 78       | 20      | 2.19           | -0.24                  | 0.6             |
| Kingston, Ont.          | 29.80                                 | 30.13                                   | +.12                   | 48.7                       | +.4                    | 56.9          | 40.6          | 76       | 24      | 2.44           | -0.11                  | 0.6             |
| Toronto, Ont.           | 29.77                                 | 30.08                                   | +.05                   | 51.2                       | +.4                    | 58.5          | 44.0          | 71       | 22      | 1.52           | -1.21                  | T.              |
| White River, Ont.       | 29.67                                 | 30.05                                   | +.01                   | 52.8                       | +.2                    | 61.4          | 44.1          | 79       | 26      | 1.53           | +0.83                  | T.              |
| Port Stanley, Ont.      | 28.71                                 | 30.04                                   | +.06                   | 41.8                       | +.7                    | 54.3          | 29.2          | 74       | 2       | 1.96           | -0.39                  | 1.0             |
| Southampton, Ont.       | 29.41                                 | 30.05                                   | .00                    | 52.0                       | +.4                    | 60.3          | 43.6          | 70       | 23      | 1.86           | -1.12                  | 0.1             |
| Parry Sound, Ont.       | 29.36                                 | 30.03                                   | -.02                   | 52.5                       | +.4                    | 61.2          | 43.8          | 74       | 25      | 2.39           | -0.78                  | 1.2             |
| Port Arthur, Ont.       | 29.38                                 | 30.08                                   | +.07                   | 49.6                       | +.5                    | 58.9          | 40.3          | 75       | 18      | 2.37           | -1.55                  |                 |
| Winnipeg, Man.          | 29.32                                 | 30.03                                   | +.05                   | 46.5                       | +.6                    | 55.0          | 38.0          | 69       | 21      | 1.55           | -1.21                  | T.              |
| Minnedosa, Man.         | 29.13                                 | 29.96                                   | -.02                   | 51.0                       | +.1                    | 61.6          | 40.4          | 85       | 17      | 2.22           | +0.62                  |                 |
| Qu'Appelle, Sask.       | 28.14                                 | 29.96                                   | -.01                   | 47.8                       | +.10                   | 58.2          | 37.4          | 82       | 18      | 1.44           | +0.24                  | T.              |
| Medicine Hat, Alberta.  | 27.66                                 | 29.90                                   | -.07                   | 46.2                       | +.6                    | 56.6          | 35.9          | 77       | 9       | 1.43           | +0.33                  | 2.0             |
| Swift Current, Sask.    | 27.64                                 | 29.93                                   | -.04                   | 47.8                       | +.3                    | 58.0          | 37.5          | 80       | 28      | 3.48           | +2.90                  |                 |
| Calgary, Alberta.       | 27.34                                 | 29.91                                   | -.06                   | 45.9                       | +.3                    | 56.7          | 35.1          | 81       | 26      | 2.49           | +1.61                  | 2.0             |
| Bafta, Alberta.         | 26.36                                 | 29.90                                   | -.05                   | 44.6                       | +.4                    | 55.8          | 33.3          | 76       | 22      | 1.82           | +1.34                  | 18.2            |
| Edmonton, Alberta.      | 25.35                                 | 29.96                                   | +.01                   | 41.4                       | +.2                    | 50.6          | 32.1          | 67       | 22      | 1.69           | +0.67                  | 1.8             |
| Prince Albert, Sask.    | 27.60                                 | 29.90                                   | -.03                   | 43.3                       | +.2                    | 54.6          | 32.1          | 68       | 23      | 1.07           | +0.37                  |                 |
| Battleford, Sask.       | 28.36                                 | 29.93                                   | -.04                   | 41.0                       | +.3                    | 48.5          | 33.6          | 64       | 17      | 1.37           | +0.54                  |                 |
| Kamloops, B. C.         | 28.20                                 | 29.94                                   | -.03                   | 46.2                       | +.6                    | 56.7          | 35.6          | 75       | 24      | 2.26           | +1.81                  |                 |
| Victoria, B. C.         | 28.70                                 | 29.92                                   | -.04                   | 49.9                       | +.2                    | 58.4          | 41.5          | 68       | 29      | 0.79           | +0.18                  |                 |
| Barkerville, B. C.      | 29.66                                 | 29.91                                   | -.10                   | 52.7                       | +.3                    | 58.0          | 47.5          | 67       | 42      | 2.58           | +0.21                  |                 |
| Hamilton, Bermuda.      | 25.58                                 | 29.86                                   | -.08                   | 41.7                       | +.2                    | 50.8          | 32.6          | 59       | 21      | 2.19           | -0.51                  |                 |
|                         | 29.92                                 | 30.08                                   | +.06                   | 72.4                       | -.6                    | 78.2          | 66.7          | 80       | 61      | 4.08           | -2.63                  |                 |

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